Predictive value of group I oral lesions in detecting HIV infection amongst patients attending PHC facilities in Gauteng[i]

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A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Dentistry in the branch of Community Dentistry.

JANUARY 2007

Declaration

I, Ahmed Bhayat, hereby declare that this research report is my own work. It is being submitted for the degree of Master of Dentistry in Community Dentistry in the University of the Witwatersrand, Johannesburg. It has not been submitted or presented for any degree or examination at this or any other University.

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…….day of March 2007.

Dedication

To my family, friends and colleagues for their help and support.

Publications and presentations

1. Presented at the Prakash Vallabh Primary Health Care (PHC) Conference in Pretoria 2006. Won first prize in the “Academic” category.
2. Presented at the International Association of Dental Research (IADR) conference in Midrand 2006.

Abstract

The utilization of oral lesions as a screening tool for HIV is not well documented. Attendees at two primary health care facilities (Khutsong and Heidelberg) were assessed to determine the predictive value of group I oral lesions for HIV infection. The objectives were to investigate the: 1) HIV prevalence amongst attendees at PHC facilities, 2) Prevalence of HIV-related oral lesions and 3) Correlation between the oral lesions and the HIV status using the Likelihood Ratio test.

Methods: All patients over 12 months of age presenting at the two facilities for a curative care consultation over a one-week period (in April 2005) were included. Consent was obtained by trained counselors who also conducted a brief interview and offered pre-test counseling to patients wishing to know their HIV status. Two calibrated dentists conducted a head, neck and oral examination and administered a rapid saliva HIV test (OraQuick HIV-1/2-Rapid HIV-1/2 Antibody Test).

Results: A total of 654 attendees were surveyed in the 2 facilities. There was a 100% response. The mean age of the participants was 34 years (range: 1-94), and the majority (73%) were female. HIV prevalence rates were 34% at Khutsong and 36% at Heidelberg. The HIV prevalence peaked at 46% in the 16-45 age groups. Of the 228 who tested positive for HIV, 121 (53%) patients were diagnosed with 1 or more Group I oral lesion. Oral candidiasis (46%) and oral hairy leukoplakia (19%) were the two most common oral lesions diagnosed in the HIV positive cohort. The positive predictive values and specificity values for multiple lesions ranged between 96% and 100%. Most of the likelihood ratios for multiple lesions were greater than 10 which implied that the patients who presented with these lesions were extremely likely to test positive for HIV. The sensitivity values (1% to 37%) and negative predictive values (66% to 70%) remained relatively low.

Conclusion: The HIV prevalence of patients attending PHC facilities was high (34%). Oral lesions are useful markers of HIV-infection and should alert clinicians to the presence of HIV infection. Multiple group I lesions were more predictive of HIV infection compared to single lesions.

Acknowledgements

I would like to acknowledge the following people who made this report possible:

- Prof Rudolph and Dr. Yengopal for their support and supervision throughout the duration of this project
- Prof Schneider who had the confidence in us to carry out the research
- Ms S Oyedele who helped obtain the data and made sure everything always ran as smoothly as possible

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